Amendments to the Specification:

In the Brief Description of the Drawings on page 5, starting on line 12, please insert the following paragraphs:

Fig. 4 depicts a similar arrangement as in Fig. 1, except that the SLED/laser diode and photodiode operate with CMY colors.

Fig. 5 depicts a similar arrangement as Fig. 2, except that the SLED/laser diode and photodiode operate with CMY colors.

Fig. 6 depicts a similar arrangement as Fig. 3, except that CMY colors are used.

Please replace the paragraph starting on page 6, line 8 with the following:

In accordance with embodiments of the present invention, a connection, particular optical connector, or other relevant connection component is specified by a connection identifier. The connection identifier gives relative or absolute magnitudes of color components in a multicolor signal. For example, the connection identifier will give the magnitudes of red, green and blue components in a RGB signal. Alternative color scales may also be used such as, e.g., CMY_x illustrated in the schemes of Figs. 4-6.

Please replace the paragraph starting on page 7, line 4 with the following:

Fig. 1 depicts an optical verification scheme where a transmission signal and verification signal travel in different fibers in the same patch cord. A patch cord 102 includes both a single-mode fiber (SMF) and a multi-mode fiber (MMF). The SMF is used to carry the payload optical transmission signal between the transmitter and the multiplexer. The MMF is used to carry the special optical verification signal according to the present invention. These fiber choices are presented by way of example. For example, the verification fiber could also be SMF. Patch cord 102 extends between SMF/MMF optical connectors 104 and 106 which are embedded in transmitter front panel 108 and multiplexer front panel 110 respectively. On the interior side of transmitter panel 108, SMF/MMF optical connector 104 is coupled to an SMF 112 carrying the transmission signal. The MMF of patch cord 102 is coupled to an RGB surface light emitting

diode (SLED) or laser diode 114 which sits within an RGB SLED housing 116. Approximately 10% coupling may be achieved between SLED/laser diode 114 and the MMF but this may be improved by use of a lens.

Please replace the paragraph starting on page 9, line 7 with the following:

Fig. 2 depicts an optical connection verification scheme where the verification signal and transmission signal share the same fiber according to one embodiment of the present invention. A patch cord 202 includes a single SMF. Patch cord 202 interconnects optical connectors 204 and 206 which are embedded in transmitter card front panel 108 and multiplexer card front panel 110 respectively. On the transmitter side, the optical verification signal is generated by an RGB edge LED (ELED) or laser diode 208. Similarly to RGB SLED/laser diode 114 of Fig. 1, RGB ELED/laser diode 208 outputs a three-color signal whose color components are determined by three drive currents output by a driver and logic block 210. The operation of driver and logic block 210 is similar to that of driver and logic block 118. A coupler 212 combines the transmission signal with the output of RGB ELED/laser diode 208 for input into patch cord 202. Coupling between ELED/laser diode 208 and the SMF may be approximately 15% but can be improved by use of a lens.